

REMARKS

In sections 1 and 2 of the Office Action, the Examiner objected to Figure 1 of the drawings. Accordingly, a corrected Figure 1 is being submitted herewith.

In section 3 of the Office Action, the Examiner objected to the specification. Accordingly, the specification has been amended to overcome the objection of the Examiner. The specification has also been amended to correct several other informalities.

In section 4 of the Office Action, the Examiner rejected claims 1-41 under 35 U.S.C. §112, first paragraph, as being directed to a non-enabling disclosure. Specifically, the Examiner argues that the specification does not enable the invention of these claims with respect to the signal distortion detector.

However, the specification discloses that the processor 16 uses the punctual correlation, the late correlations, and/or the early correlations to determine whether a fault exists. (See page 11, lines 5-12.)

In determining whether a fault exists, the processor 16 shifts the reference 14-P, which may be a replica of the code contained in the received signal, until an optimum correlation is obtained by the

correlator 12-P. This optimum correlation is the peak shown in Figure 3. The processor 16 then controls the other references so that they are replicas of the reference 14-P and so that they are time shifted with respect to the reference 14-P by varying predetermined amounts. The correlation of the received code with these time shifted references produces progressively reduced correlation as shown by the slopes in Figure 3. (See Figure 3 and page 11, line 13 to page 13, line 6.)

These correlations are used to determine differences $d_{i,j}$ which are compared to expected deviations to determine the existence of a fault. (See page 14, line 9 to page 15, line 3.)

Accordingly, one skilled in the art will understand that, if the signal containing the code transmitted by the satellite is not distorted, the correlations described above will follow the expected curve, such as the curve shown in Figure 3, and the differences $d_{i,j}$, therefore, will not exceed their expected deviations. However, if the signal is distorted because there is a fault in the satellite, then the correlations will not follow the expected curve, and the differences $d_{i,j}$, therefore, will exceed their expected deviations.

Thus, the differences $d_{i,j}$ do not exceed their expected deviations unless the signal received from the satellite is not as it should be, i.e., the signal received from the satellite is distorted. Because the processor 16 is described in the specification as the device that determines whether the differences $d_{i,j}$ exceed their expected deviations, the processor is *per force* the signal distortion detector recited in independent claim 1.

Moreover, the specification of the present application discloses that the invention described therein detects satellite signal faults, that these faults result in signal distortions detectable by use of the invention, and that the invention can be used to detect other signal distortions such as those arising from multipath and satellite code cross correlation effects. (See page 21, line 19 through page 22, line 6.

Thus, this portion of the specification makes even more abundantly clear that the processor 16, in detecting whether the differences $d_{i,j}$ exceed their expected deviations, is detecting faults and these faults arise from signal distortions. Therefore, the processor 16 is a signal distortion detector.

As can be seen, the specification of the present invention fully enables independent claim 1.

Similarly, the methods of independent claims 17 and 32 are fully enabled by the specification for the same reasons.

CONCLUSION

In view of the above, the claims of the present application are fully enabled. Accordingly, allowance of these claims and issuance of the present application are respectfully requested.

Respectfully submitted,

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